

AMENDMENTS TO THE CLAIMS

Please cancel claims 10, 11 and 18, and amend claims 20 through 24 such that the claims of the application have the following formulations and statuses:

1. (Previously presented) An electrodeless lamp, comprising:
 - an envelope containing a discharge gas;
 - a magnetic material core in the envelope;
 - an induction coil wound around the magnetic material core;
 - a socket affixed to the envelope for receiving electrical power supplied to the electrodeless lamp;
 - a driver circuit electrically connected to the socket for supplying an oscillatory electric current to the induction coil to operate the electrodeless lamp; and
 - a heat conduction means thermally coupled to the magnetic material core and the socket for conducting heat generated in the magnetic material core to the socket.
2. (Previously presented) An electrodeless lamp according to claim 1 wherein the envelope has a reentrant cavity, and the magnetic material core is positioned to be adjacent to the reentrant cavity.
3. (Original) An electrodeless lamp according to claim 1 wherein:
 - the magnetic material core has a hollow portion;
 - the heat conduction means includes a tube and a cylindrical portion thermally coupled to the tube; and
 - at least a portion of the tube is positioned inside the hollow portion, and the cylindrical portion is thermally coupled to the socket.

4. (Original) An electrodeless lamp according to claim 1 wherein the heat conduction means is formed of a material having a thermal conductivity of 20 W/m•K or higher and an electrical resistivity of 2 Ω•m or higher.

5. (Original) An electrodeless lamp according to claim 1 wherein the heat conduction means is formed of at least one of a metal material and a ceramic material.

6. (Original) An electrodeless lamp according to claim 5 wherein the metal material includes at least one of copper and aluminum.

7. (Original) An electrodeless lamp according to claim 5 wherein the ceramic material includes at least one of alumina, aluminum nitride, and silicon carbide.

8. (Previously presented) An electrodeless lamp according to claim 3 wherein the socket has a first thread, and the cylindrical portion has a second thread which is mechanically coupled to the first thread.

9. (Original) An electrodeless lamp according to claim 3 wherein one end of the tube is thermally coupled to the cylindrical portion, and the other end of the tube is positioned inside the hollow portion of the magnetic core.

10. (Canceled)

11. (Canceled)

12. (Previously presented) An electrodeless lamp, comprising:
an envelope containing a discharge gas;

a magnetic material core in the envelope;
an induction coil wound around the magnetic material core;
a driver circuit for supplying an oscillatory electric current to the induction coil to operate the electrodeless lamp; and
a reconfiguration means magnetically coupled to the magnetic material core for shaping a magnetic field generated by the electric current flowing through the induction coil so as to aid in directing a resulting magnetic flux to pass through the envelope.

13. (Previously presented) An electrodeless lamp according to claim 12 wherein the reconfiguration means includes a disk formed of a magnetic material which is magnetically coupled to the magnetic material core.

14. (Previously presented) An electrodeless lamp according to claim 13 wherein the kind of magnetic material in the disk is identical to the kind of material in the magnetic material core.

15. (Previously presented) An electrodeless lamp, comprising:
an envelope containing a discharge gas;
a magnetic material core in the envelope;
an induction coil wound around the magnetic core;
a driver circuit for supplying an oscillatory electric current to the induction coil to operate the electrodeless lamp;
a heat conduction means thermally coupled to the magnetic material core for conducting heat generated in the magnetic material core to the outside of the electrodeless lamp; and

a heat reduction means magnetically coupled to the magnetic material core for reducing thermal influences of magnetic fields generated by the electric current flowing through the induction coil that are exerted on the heat conduction means.

16. (Original) An electrodeless lamp according to claim 15 wherein the heat reduction means includes a disk formed of a magnetic material which is magnetically coupled to the magnetic material core.

17. (Previously presented) An electrodeless lamp according to claim 16 wherein the kind of magnetic material in the disk is identical to the kind of material in the magnetic material core.

18. (Canceled)

19. (Previously presented) An electrodeless compact fluorescent lamp, the lamp comprising:
a bulbous transparent envelope;
a discharge gas provided in the envelope;
an enclosure secured between the envelope and a lamp holder engagement structure to provide at least in part an interior space therebetween;
an induction coil positioned adjacent the envelope, the induction coil for forming a plasma in the envelope to produce electromagnetic radiation;
a magnetic field manipulation structure of a magnetically permeable material positioned adjacent the induction coil so as to separate the induction coil from most of the interior space;
and

a primary cooling structure of a thermally conductive material positioned adjacent the magnetic field manipulation structure and in part to extend into the interior space.

20. (Currently amended) The ~~device~~ lamp of claim 19 wherein the primary cooling structure has a portion thereof secured between the envelope and the enclosure.

21. (Currently amended) The ~~device~~ lamp of claim 19 wherein the primary cooling structure has a portion thereof extending to the lamp holder engagement structure.

22. (Currently amended) The ~~device~~ lamp of claim 19 wherein the primary cooling structure has that portion thereof immediately adjacent the magnetic field manipulation structure formed as a tube portion with an end of that tube portion farthest from the enclosure surrounded by a portion of the magnetic field manipulation structure which extends past the end of the tube further from the enclosure.

23. (Currently amended) The ~~device~~ lamp of claim 20 wherein there is a thermal insulator positioned between the magnetic field manipulation structure and portions of the interior space.

24. (Currently amended) The ~~device~~ lamp of claim 21 wherein there is a thermal insulator positioned between the magnetic field manipulation structure and portions of the interior space.